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REMARKS

The non-final Office Action dated December 6, 2006 has been received and its contents carefully studied. Claims 1-41 are pending, and all claims stand rejected, including the independent claims 1, 15, 23, and 36. These independent claims are all rejected as anticipated under 35 U.S.C. § 102(e) by *Kagehiro* (U.S. Patent Application No. 2003/0044068). Additionally, dependent claims 2, 4, 8, 16, 24, 32, 38, and 40 are rejected as obvious under 35 U.S.C. § 103(a) due to *Kagehiro* in view of an article by *Clark et al.* Dependent claims 9 and 29 are rejected as obvious under 35 U.S.C. § 103(a) due to *Kagehiro* in view of *Smethers* (U.S. Patent No. 6,560,640 B2).

Regarding the independent claims, claim 1 is for a method, claim 15 is for a system, claim 23 is for a mobile device, and claim 36 is for software. All of the four independent claims cover a similar inventive concept. Therefore, it will suffice to focus on claim 1 here.

The Present Amendments of Claim 1

The claims are presently amended, without prejudice, in order to expedite prosecution of the application. The amendments clarify that it is the mobile device that locates and recognizes the URL glyphs, rather than the user performing those steps. This is supported at least be page 3 of the application as originally filed, especially lines 10-12. A main point of the invention is to have the camera recognize the URL glyphs (e.g. www or http); “after” those standardized glyphs are recognized then the URL is extracted.

This is very different from the *Kagehiro* reference, which states that a user must move a “marker” close to a URL character line, and subsequently the user must input a “confirmation instruction” when the URL is inside a “rectangle strip” (see paragraph 25 of *Kagehiro*). These steps of *Kagehiro* are completely unnecessary according to the present claimed invention, because the present independent claims describe features that are nowhere



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suggested by *Kagehiro*. *Kagehiro* does not suggest that a mobile device locates and recognizes any glyphs, much less standardized glyphs like www and http.

The only automated character recognition in *Kagehiro* occurs when the user has performed various tedious steps. According to *Kagehiro*, that character recognition (described in paragraph 25) does not occur “after” the camera has already located and recognized standardized URL glyphs, as presently claimed by the independent claims. The present invention cleverly allocates scarce processor resources by first locating relatively easily identifiable standardized URL characters, and only then extracting remaining parts of the URL. This automates a procedure which in *Kagehiro* is largely manual.

Brief Summary of the Present Invention

The present invention uses a digital camera to take a digital photograph of an object having a written URL, using pattern recognition to extract the URL from the photograph based on known URL patterns (or glyphs) as “http”, “www”, “com” and using the recognized URL to command the mobile device to open the corresponding URL in the relevant browsing application. The invention is designed so as to operate with minimal user involvement.

Brief Summary of the Primary Reference

The Office Action refers to *Kagehiro*, where an article of manufacture for image capturing, image recognition, and retrieval of information based on the recognized image is presented. *Kagehiro* relies upon a separate server from the mobile device in order to recognize a URL within the resulting image (see paragraph 30). Furthermore, *Kagehiro* relies upon the user to select portions of the image results to send to the server for information retrieval (see paragraph 25). As a result, *Kagehiro* presents additional steps that the present invention eliminates, when a URL is used to communicate with the internet. The present invention accomplishes this by using a two-part process of finding the standardized URL characters (i.e. glyphs), and thereafter extracting remaining parts of the URL.

Further Reasons Why Amended Claim 1 is not Anticipated or Suggested by *Kagehiro*

The camera unit of present claim 1 views a scene that contains the written URL, then converts the visual image to electronic format, locates a set of URL glyphs (e.g. “com” or “www”) in the electronic image, and then extracts the rest of the URL. The extracted URL is used to access a web site. This locating process is entirely different from *Kagehiro*, because *Kagehiro* requires various manual steps by the user. Paragraph 25 of *Kagehiro* describes the need for a user to move a “marker” to a URL character line, and subsequently the user must confirm that the URL is within a “rectangle strip.” All of this teaches away from the present claimed invention.

In contrast, *Kagehiro* teaches away from a device that locates a standardized set of URL glyphs. At paragraph 25, *Kagehiro* explains “the operator can select the recognition target character line with ease by operating the device, or shifting the marker” (emphasis added). *Kagehiro*’s Figure 2 shows that the operator must use the “marker” and “rectangular strip” in the display to select a URL character line. *Kagehiro* discusses character line extraction and recognition, but this is entirely different from present claim 1 (paragraph 23). Characters of the visual image produced on the display in *Kagehiro* are only recognized as characters and nothing more. The present claim 1 includes an additional locating and recognizing step in which glyphs are recognized as a URL, based on a standardized set of URL characters. In *Kagehiro* the operator must indicate which portion of the captured image is to be sent to a server for further processing.

Paragraph 25 of *Kagehiro* only describes character recognition processing on a URL character line. “Character recognition,” as described in *Kagehiro*, is different than “locating glyphs of at least one particular standardized set of URL characters.” In the “character recognition” described by *Kagehiro* the device only recognizes whether or not a particular part of the image is an alpha-numeric symbol. In present claim 1, the URL is recognized based on a particular standardized set of URL characters. As claim 1 states, “extracting an extractable URL from the electronic image *after* locating glyphs which are at least partly from the group consisting of 'http' and 'www'” (emphasis added). In contrast, the system in *Kagehiro* does not



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make any effort to locate URLs specifically; it is up to the user to point toward the portion of the image that may contain a URL of interest using the marker (202) and rectangular strip (203).

Kagehiro further differs from amended claim 1, because *Kagehiro*'s character line is not recognized as a URL until it is sent to a network computer for processing (see Fig. 5). The Office Action states that *Kagehiro* discloses extracting an extractable URL from the electronic image after locating the glyphs which are at least partly from the group consisting of "http" and "www." *Kagehiro* does refer to character line recognition and character line extraction performed on a URL character line. (Fig. 1 & 2; paragraph 23; paragraph 25). However, this disclosure from *Kagehiro* differs greatly from the present invention. Figures 1 and 2 of *Kagehiro* only demonstrate the overall process disclosed by *Kagehiro*, which lacks important elements described by the present invention. Figure 2 must be read in light of Figure 5, which demonstrates that the selected characters are not recognized as a URL until sent to the server. Unlike amended claim 1, there is no recognition of whether a set of glyphs is a URL until the captured image is sent to a server for processing (see Fig. 5; paragraph 30: "The character line transmitted to the computer is received by a computer or a server...Whether the character line is a URL address or other character line is distinguished in a step."). Present claim 1 does not require the use of a separate server for locating or recognizing the URL, and present dependent claim 5 only indicates that the extraction (rather than the locating and recognizing) may be facilitated via the network. The present claim 1 is directed to locating and recognizing a URL from an electronic image before a signal is sent to a web server. Therefore, *Kagehiro* does not anticipate claim 1, because in claim 1 the entire recognition of a URL is performed on one device without the need to send the image to a separate server for URL detection.

Regarding independent claims 15, 23, and 36 (system, mobile device, and software, respectively), the Office Action refers to the same sections in *Kagehiro*. Therefore, all of the explanations provided above are applicable to those claims as well. Since independent claims 1, 15, 23, and 26 are not anticipated or suggested by *Kagehiro*, none of the dependent claims are anticipated or suggested by *Kagehiro* either.



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Dependent Claims 2, 4, 8, 16, 24, 25, 32, 38, and 40 are Patentable Over *Kagehiro* in View of *Clark*

Although dependent claims 2, 4, 8, 16, 24, 25, 32, 38, and 40 are clearly allowable due to the allowability of the amended independent claims from which they depend, a few comments are appropriate. These claims are rejected as obvious under 35 U.S.C. § 103(a) by *Kagehiro* in view of *Clark et al.*, but there is no suggestion or motivation to combine *Clark* with *Kagehiro* to overcome the particular problem that the claims seek to address.

The Office Action states on page 13 that the motivation to combine stems from resolving problems of low image resolution, but the present invention addresses URL detection based upon a standardized set of URL characters within a captured image. *Kagehiro* only suggests means to improve a captured image of low resolution, and *Clark* only suggests a means to realign a particular image to provide a front-parallel view. However, neither reference suggests to one of ordinary skill in the art that the standardized part of a URL (e.g. “www”) enables the determination of the rest of the URL text. Therefore, the above mentioned claims are non-obvious and patentable.

Dependent Claims 9 and 29 are Patentable Over *Kagehiro* in View of *Smethers*

Although dependent claims 9 and 29 are clearly allowable due to the allowability of the amended independent claims from which they depend, a few comments are appropriate. Dependent claims 9 and 29 are rejected as obvious under 35 U.S.C. § 103(a) by *Kagehiro* in view of *Smethers*, but there is no suggestion or motivation to combine *Smethers* with *Kagehiro* to overcome the particular problem that the claims seek to address.

Neither *Kagehiro* nor *Smethers* suggests to one of ordinary skill in the art that the standardized part of a URL (e.g. “www”) enables the determination of the rest of the URL text. *Smethers* teaches using compact bookmark identifiers to communicate with a server, which will then convert the compact identifiers into appropriate URLs. (see column 8, lines 45-54). This is entirely different from the present invention, in which the aim is to determine a complete URL from a particular electronically captured image. In *Smethers*, the complete URL must be entered by the user in order to create a bookmark. In contrast, the present invention utilizes recognition



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of standardized parts of a URL to determine the presence of the remaining portion of the URL. There is no suggestion to one of ordinary skill in the art to combine the teachings of *Smethers* and *Kagehiro* to locate a standardized set of URL characters, and extract the rest of the URL based on those characters.

CONCLUSION

It is earnestly requested that the application be reconsidered, and that the four amended independent claims (which are similar to each other) be allowed, as well as the claims depending therefrom. Applicant respectfully requests that the Examiner please contact Applicant's attorney by telephone, if doing so might facilitate or expedite examination of the present application. It is submitted that early passage of the present claims to issuance would be appropriate according to the relevant statutes and regulations, in view of the novel and useful invention claimed by the present application.

Respectfully submitted,

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